

LOS ANGELES TO SAN DIEGO

LOS ANGELES TO SAN DIEGO VIA THE INLAND EMPIRE SECTION

PRELIMINARY ALTERNATIVES ANALYSIS REPORT



Presentation to
**California High-Speed
Rail Authority
Board of Directors**

March 3, 2011

***Preliminary Alternatives Analysis
Report***

**Los Angeles to San Diego
via the Inland Empire
Preliminary Alternatives
Analysis Report**

Now available at:
www.cahighspeedrail.ca.gov

LOS ANGELES TO SAN DIEGO

LOS ANGELES TO SAN DIEGO VIA INLAND EMPIRE SECTION



- ❑ **170-Mile Corridor**
 - ✓ 500 miles of Alternatives
- ❑ **8 Stations**
 - ✓ 24 candidate sites
- ❑ **3 Caltrans Districts**
 - ✓ Districts 7, 8 and 11
 - ✓ Unique interface opportunity
- ❑ **4 Counties (TWG per county)**
 - ✓ Los Angeles, San Bernardino, Riverside, San Diego
- ❑ **Nearly 100 Cities**
- ❑ **Alignments run through:**
 - ✓ 19 Congressional Districts
 - ✓ 23 State Senate
 - ✓ 31 State Assembly



Southern California Inland Corridor Group (MOU Partners)



CHSRA BOARD MEETING FEBRUARY, 2010



- Reviewed Draft Scoping Report with Board
- Regional support for addition of I-10 alternative and San Gabriel Valley El Monte Station
- Proposed I-10 alternative emulates Regional High Speed Transport Studies along corridor
- Regional support in San Diego for additional alternatives

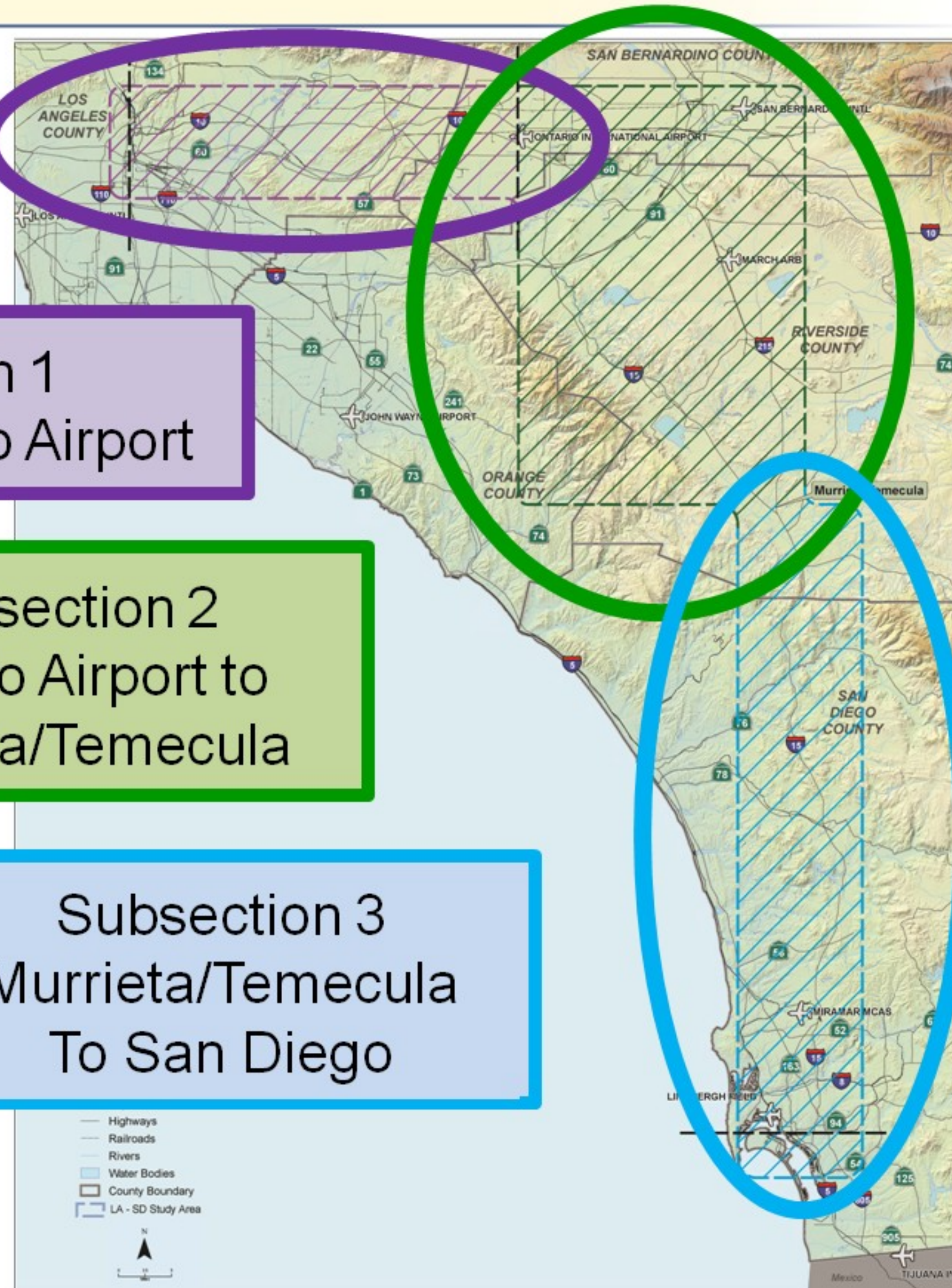


PROJECT STUDY AREA: SUBSECTIONS

Subsection 1
LAUS to Ontario Airport

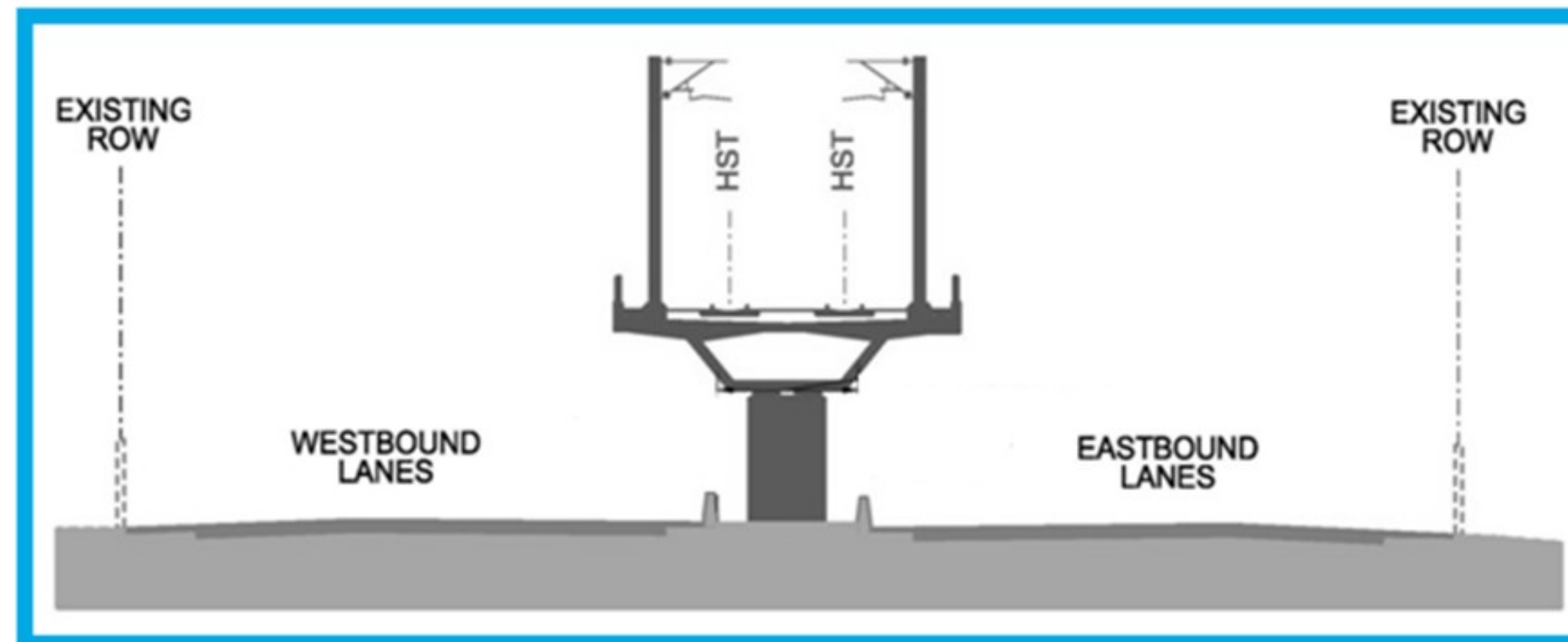
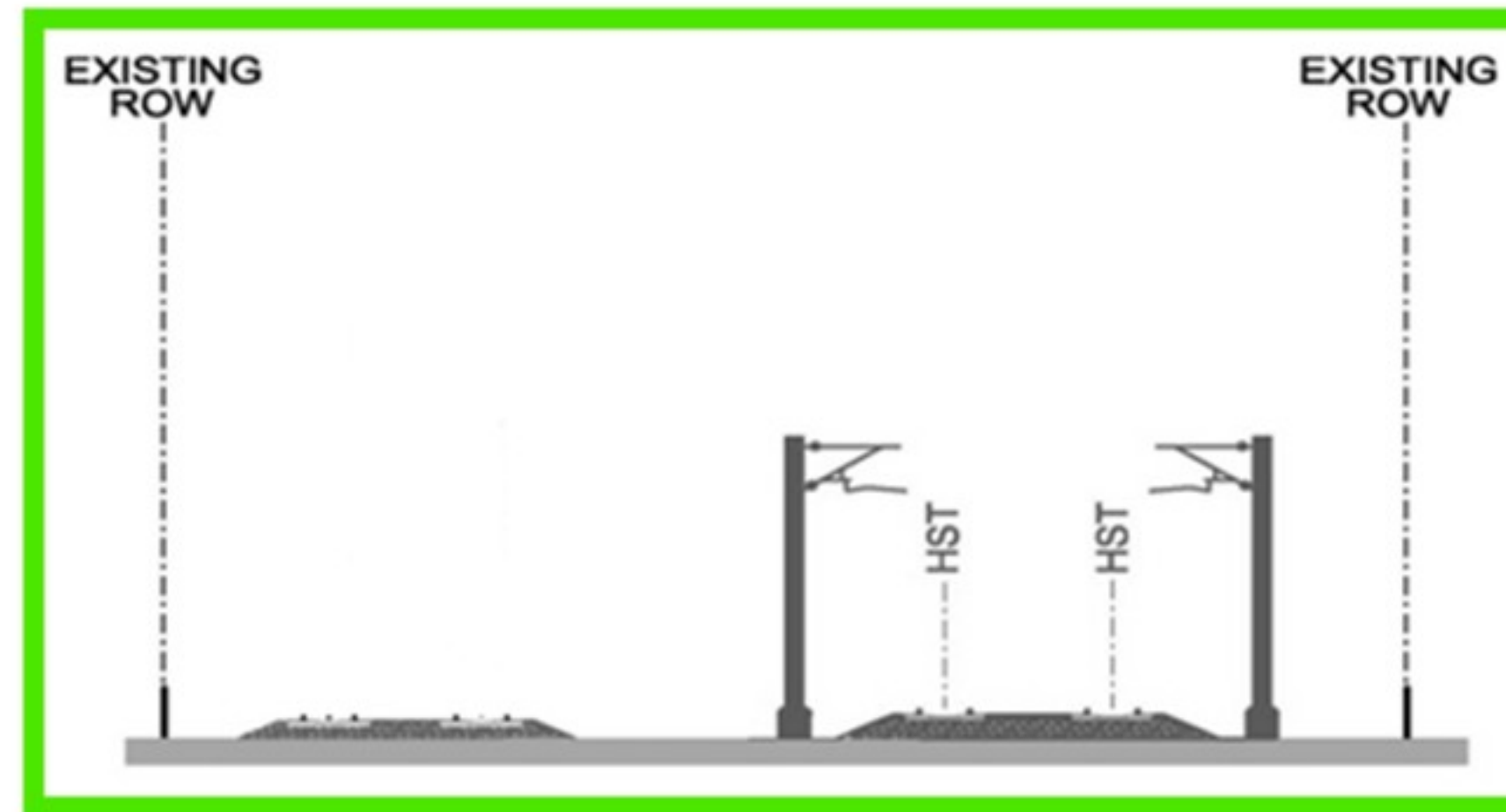
Subsection 2
Ontario Airport to
Murrieta/Temecula

Subsection 3
Murrieta/Temecula
To San Diego



TYPICAL SECTIONS

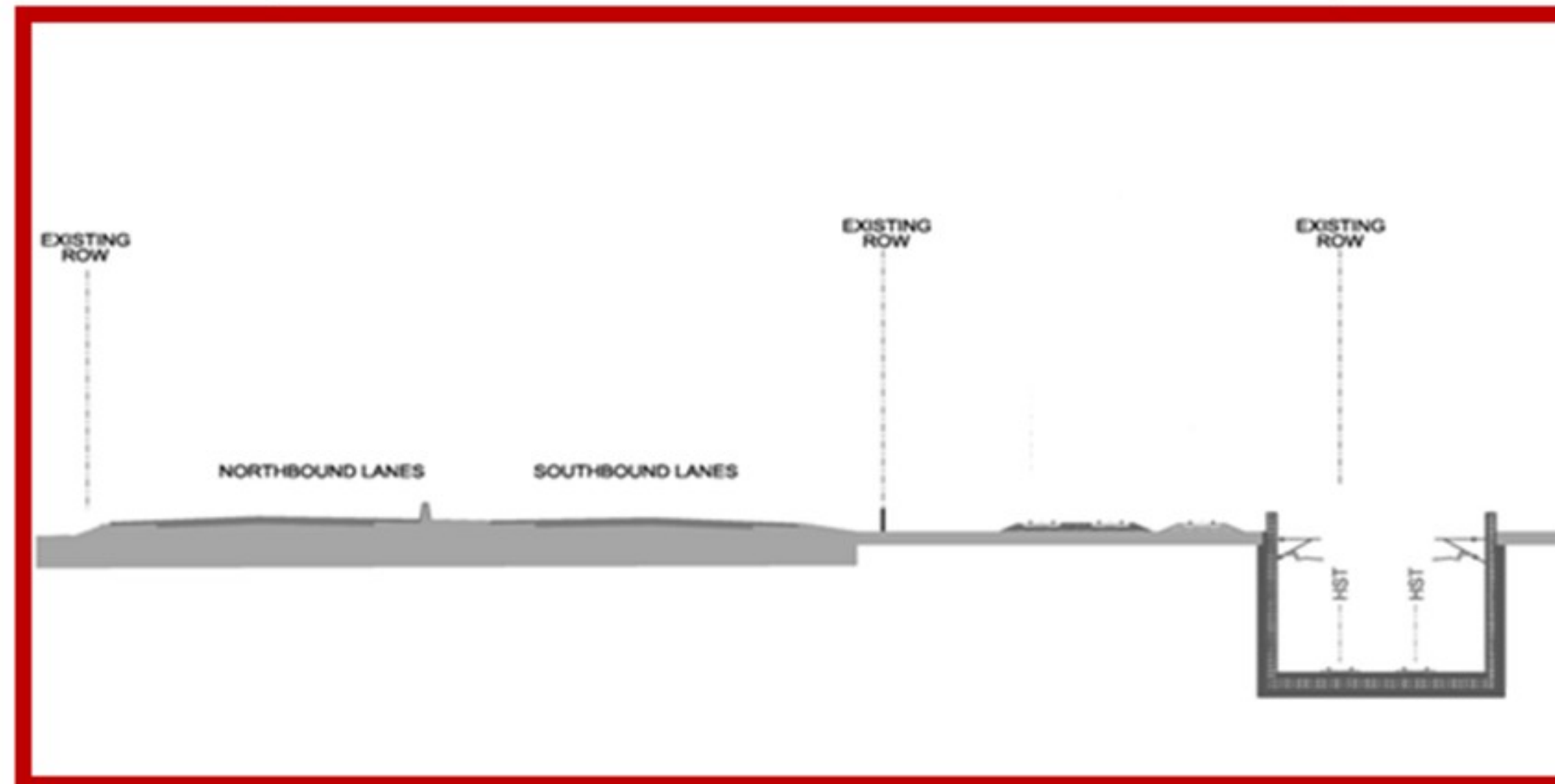
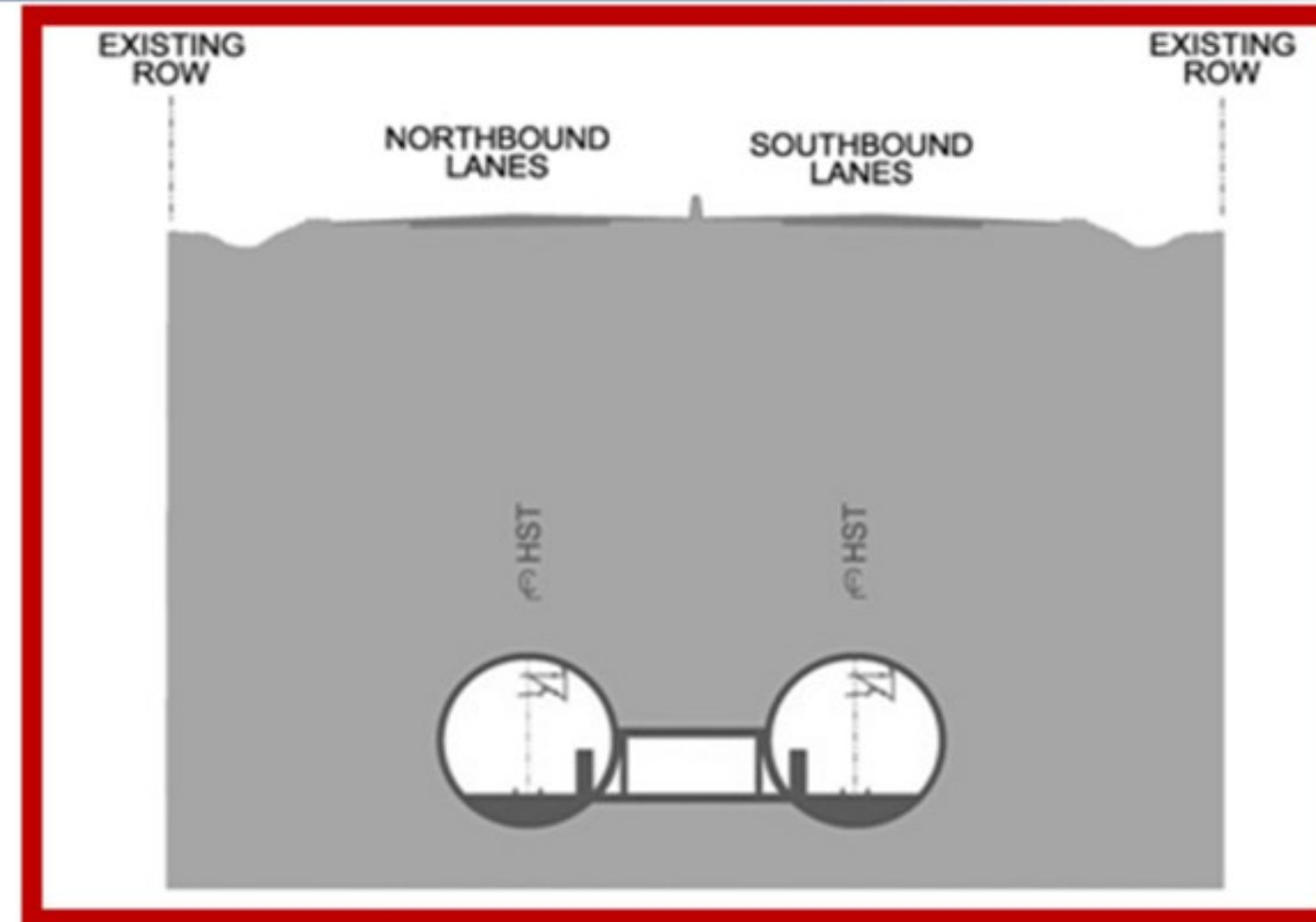
- At-Grade



- Above
Grade
Structure

TYPICAL SECTIONS BELOW GRADE OPTIONS

- Bored-Tunnel



- Trench

S1-A3: UNION PACIFIC RAILROAD (UPRR)

- ## Industry Station Option

- ## Pomona/UPRR Station Option

- station was withdrawn.

Pomona/UPRR Station Option

 - Alignment alternative for this station was withdrawn.

Legend:

 - Above Grade Structure

- 10

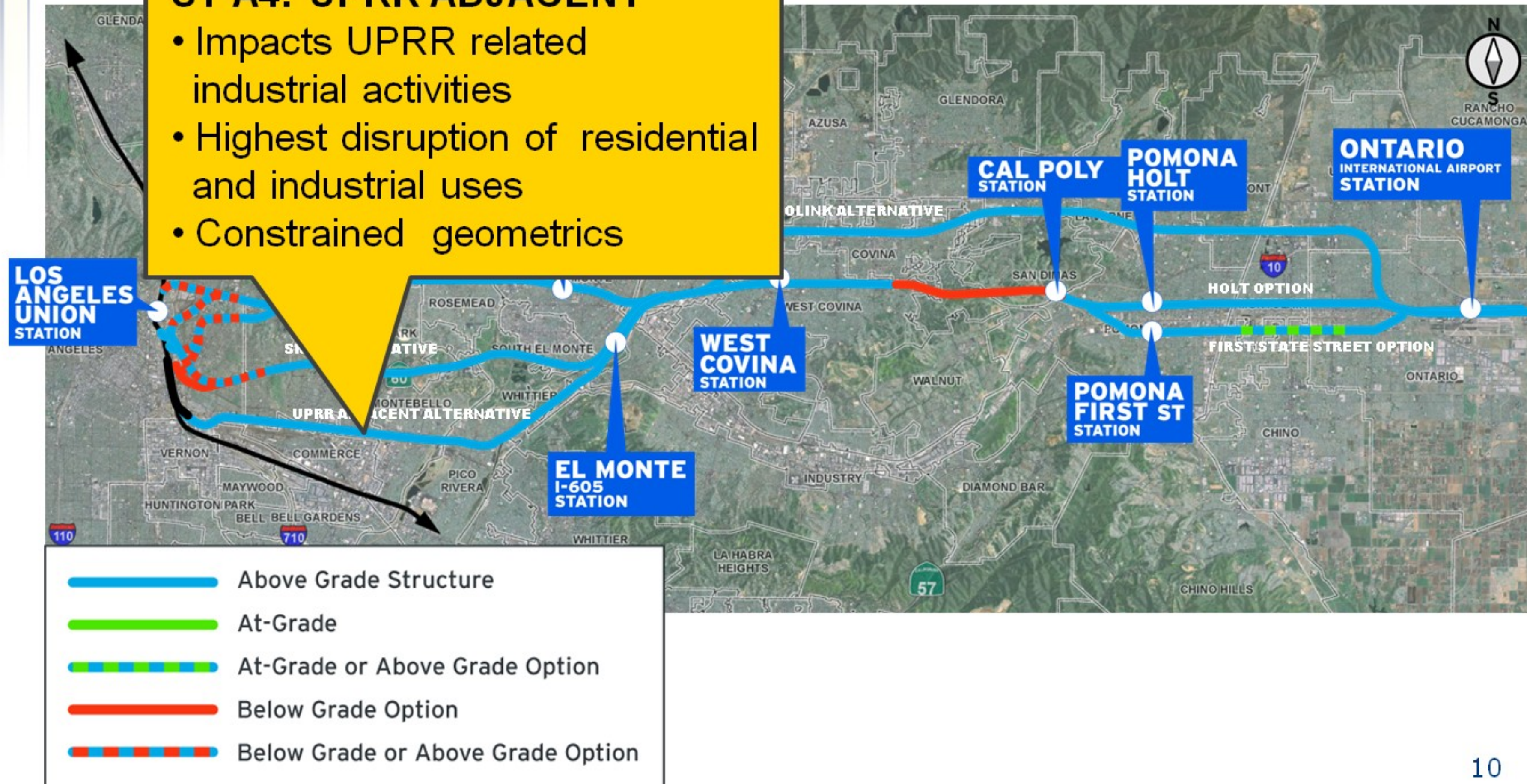
SUBSECTION 1

Los Angeles to Ontario International Airport

RECOMMENDED FOR WITHDRAWAL:

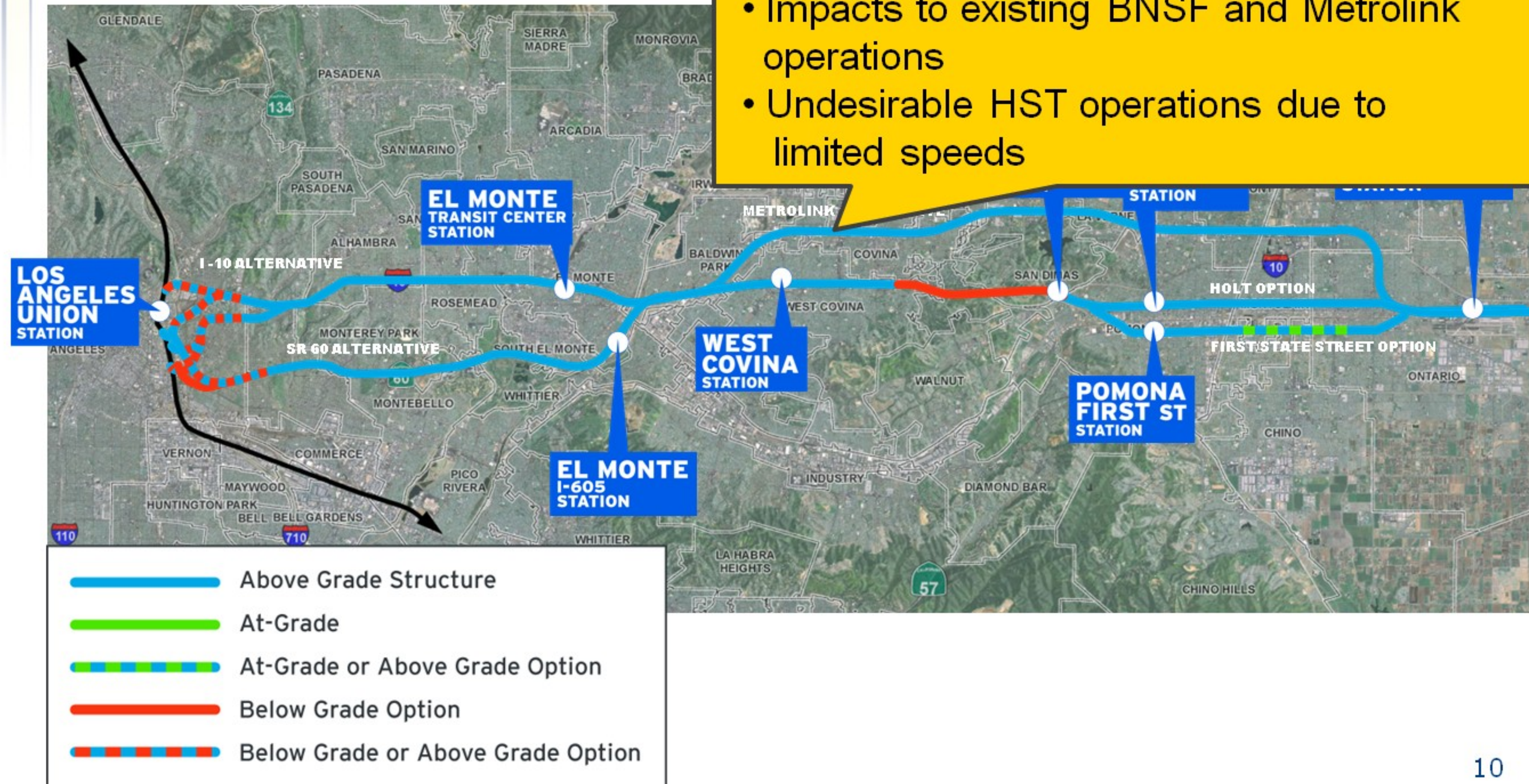
S1-A4: UPRR ADJACENT

- Impacts UPRR related industrial activities
- Highest disruption of residential and industrial uses
- Constrained geometrics



SUBSECTION 1

Los Angeles to Ontario Intern



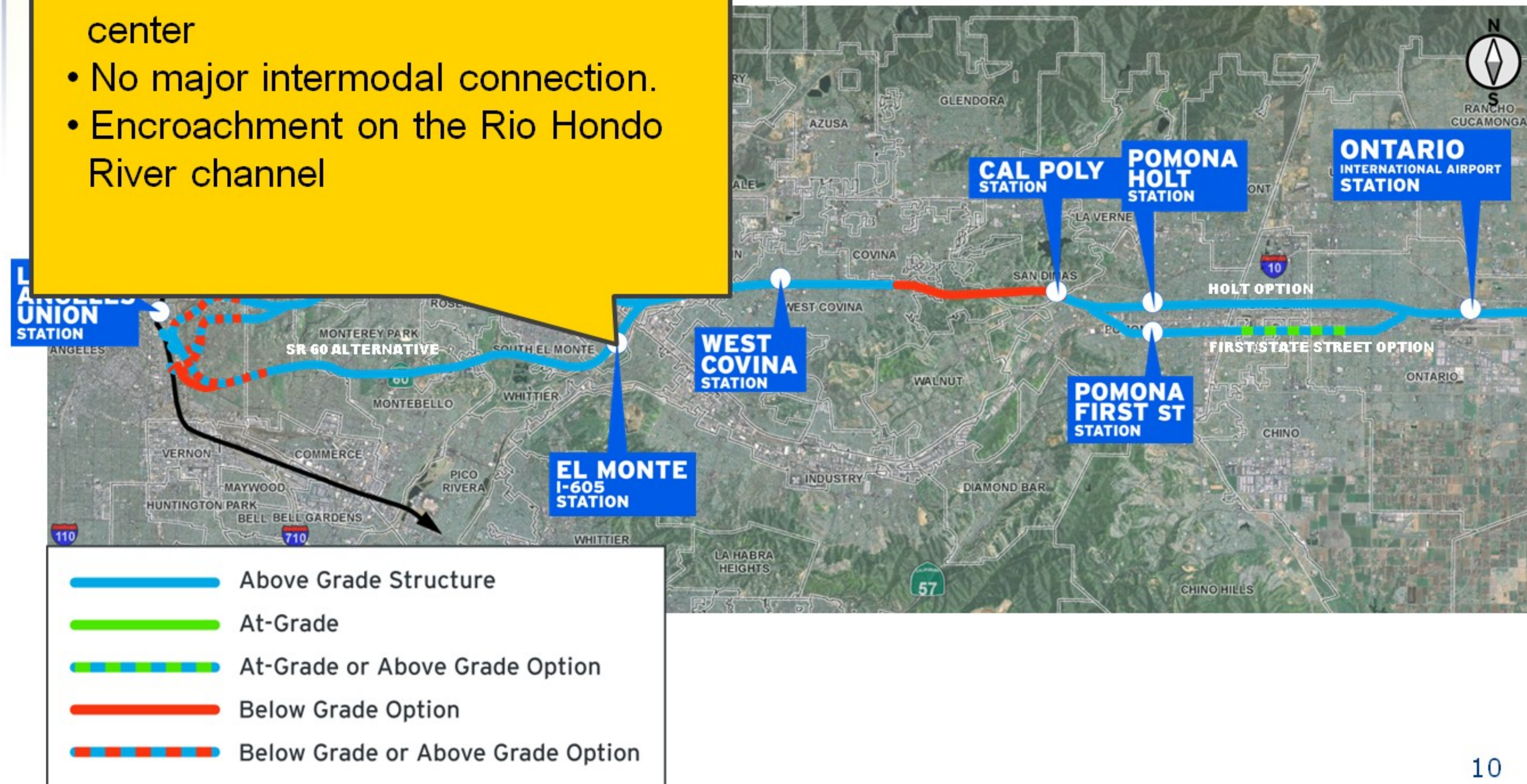
SUBSECTION 1

Los Angeles to Ontario International Airport

RECOMMENDED FOR WITHDRAWAL:

El Monte I-605 Station Option

- Station site not close to urban center
- No major intermodal connection.
- Encroachment on the Rio Hondo River channel



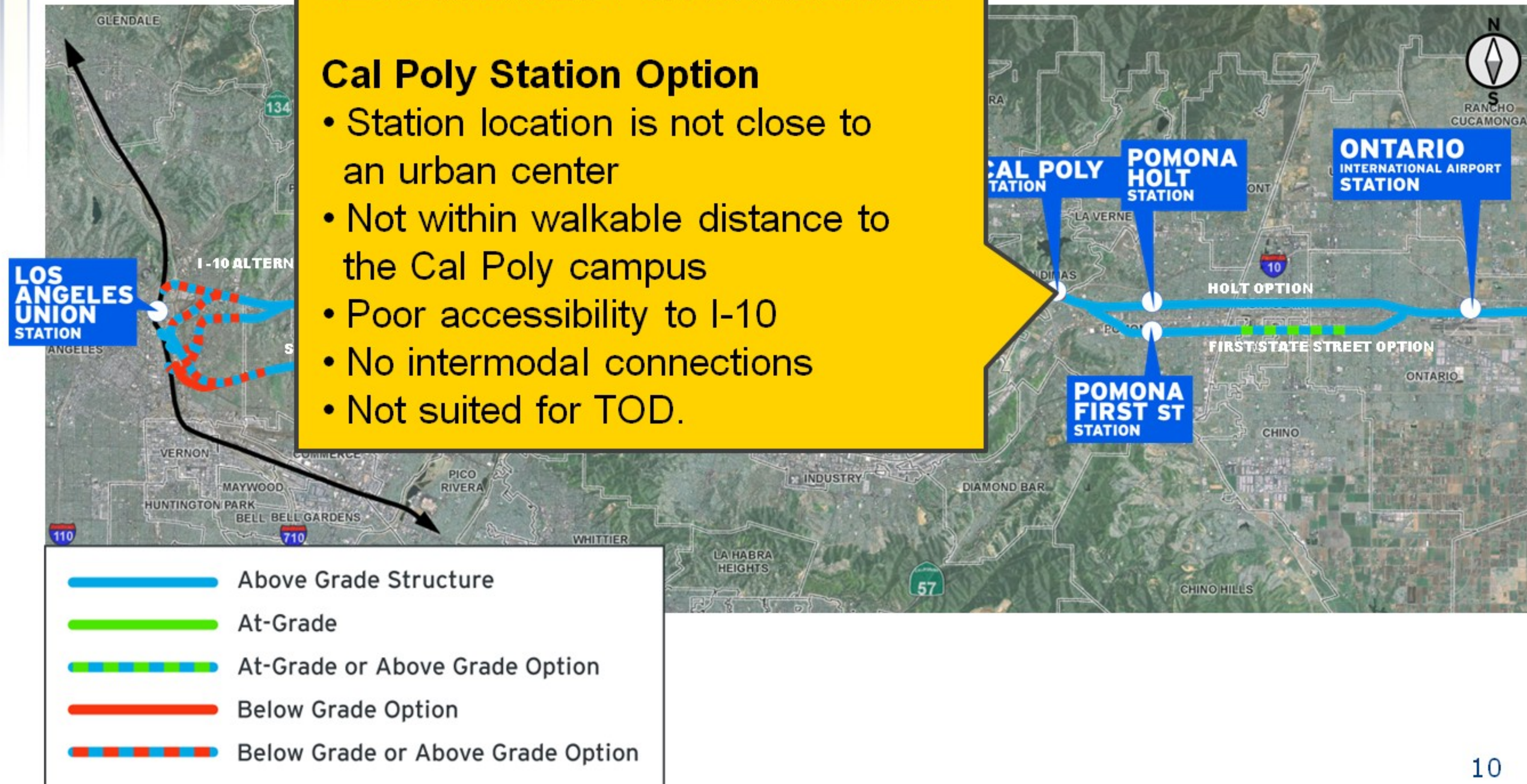
SUBSECTION 1

Los Angeles to Ontario International Airport

RECOMMENDED FOR WITHDRAWAL:

Cal Poly Station Option

- Station location is not close to an urban center
- Not within walkable distance to the Cal Poly campus
- Poor accessibility to I-10
- No intermodal connections
- Not suited for TOD.



Los Angeles to Ontario International Airport

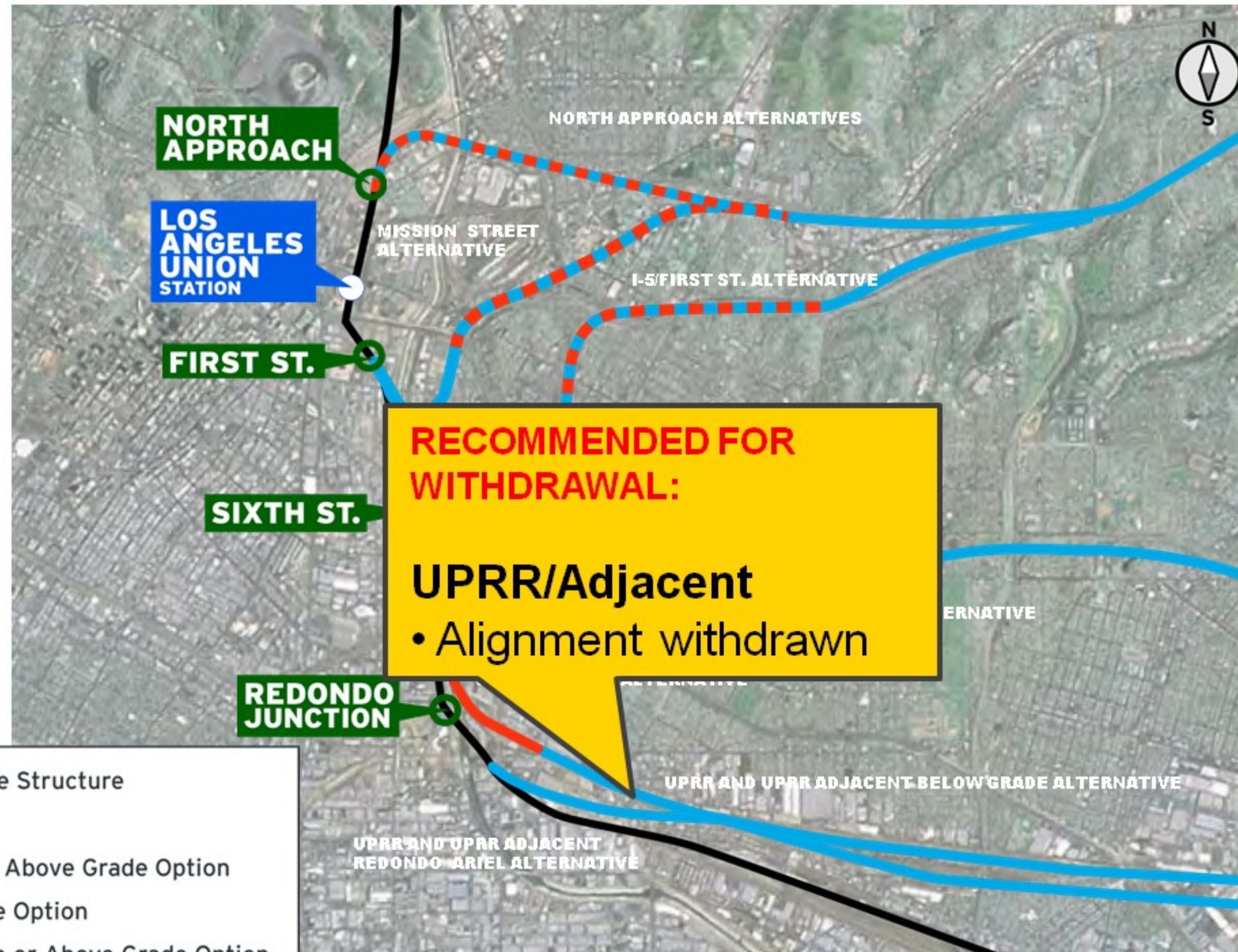


LOS ANGELES APPROACHES AND CONNECTIONS

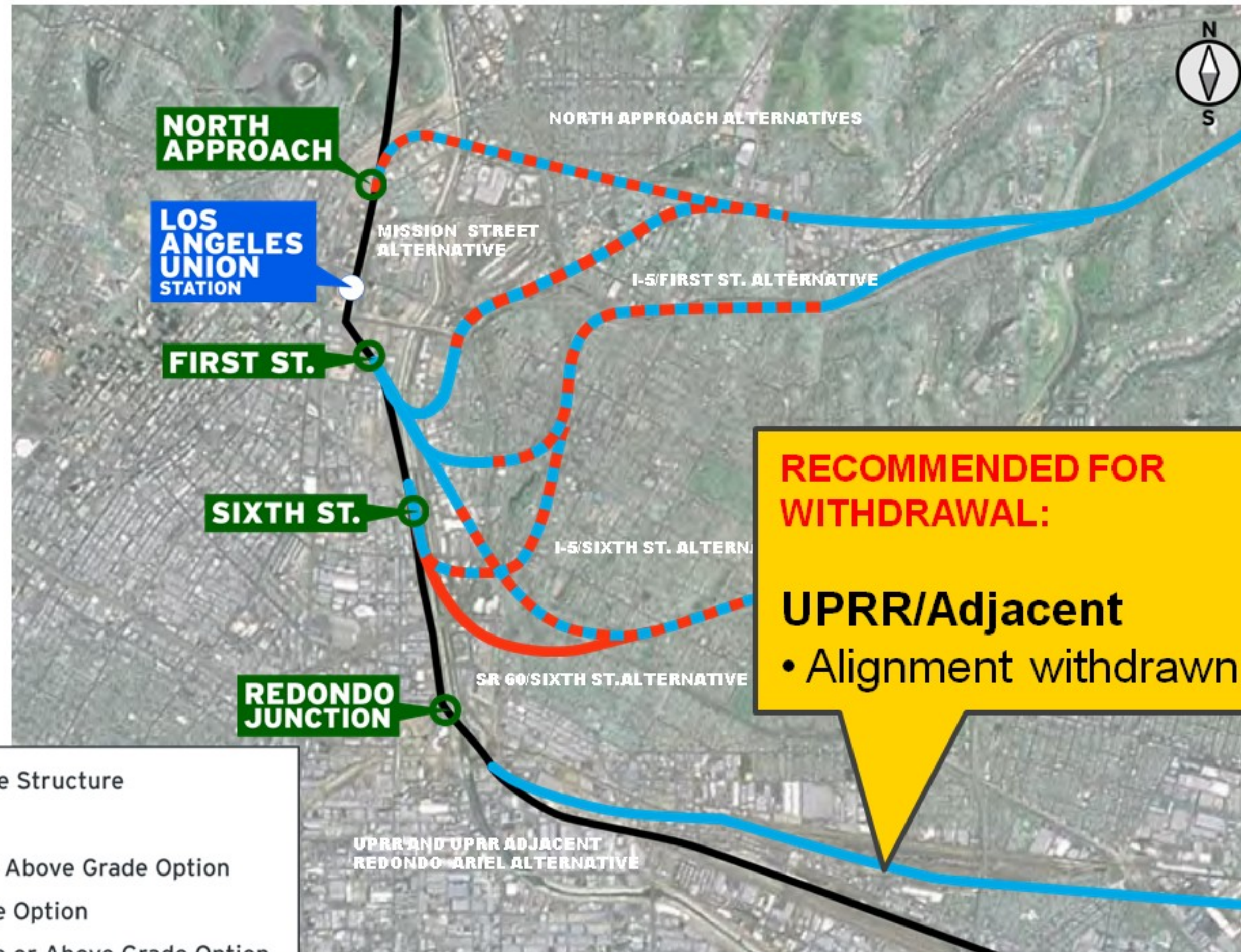








- Above Grade Structure
- At-Grade
- - At-Grade or Above Grade Option
- Below Grade Option
- - Below Grade or Above Grade Option
- Potential Connection Point

LOS ANGELES APPROACHES AND CONNECTIONS



LOS ANGELES APPROACHES AND CONNECTIONS



-  Above Grade Structure
-  At-Grade
-  At-Grade or Above Grade Option
-  Below Grade Option
-  Below Grade or Above Grade Option
-  Potential Connection Point

LOS ANGELES APPROACHES AND CONNECTIONS



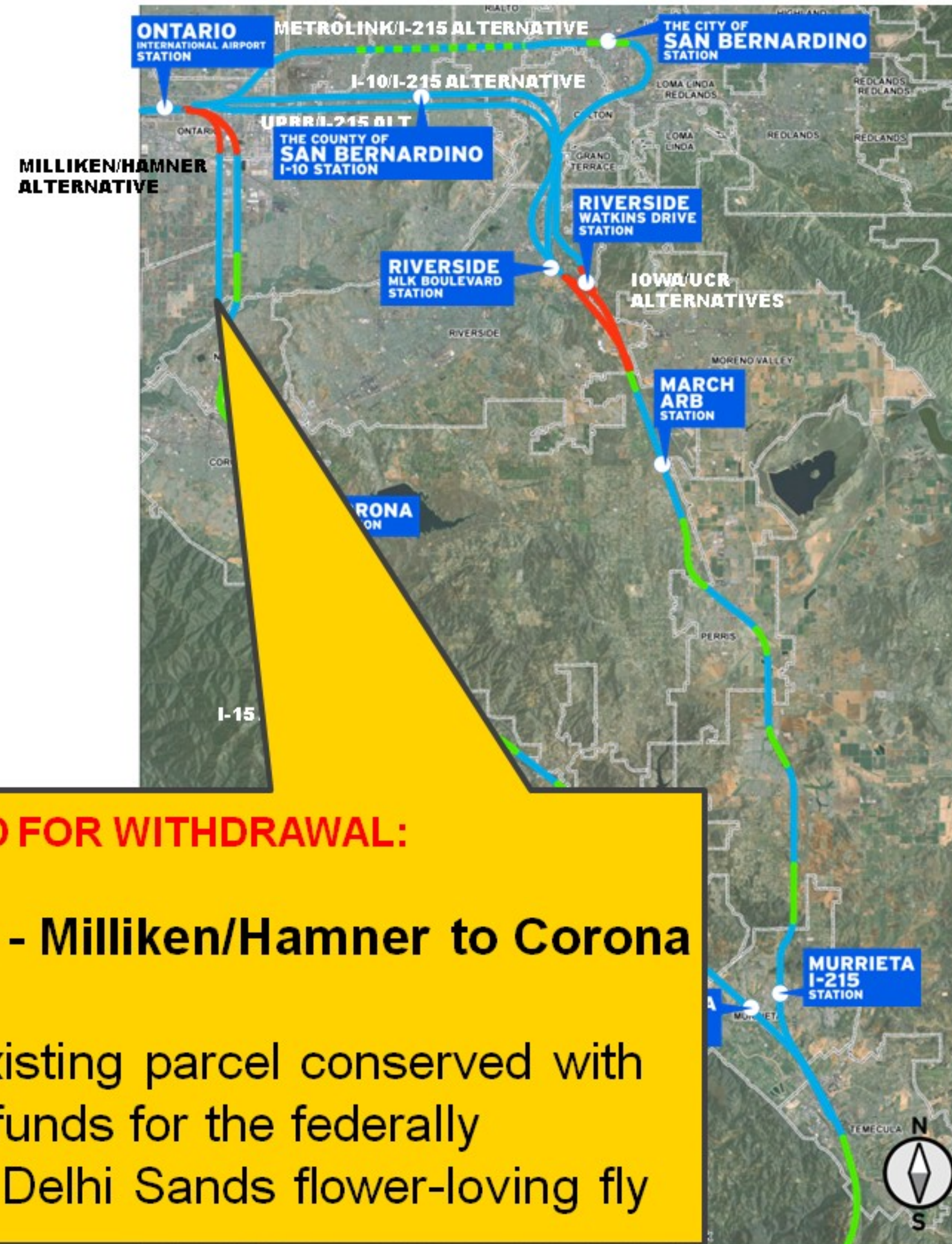
SUBSECTION 2

Ontario International Airport to Murrieta/Temecula



SUBSECTION 2

Ontario International Airport to Murrieta/Temecula



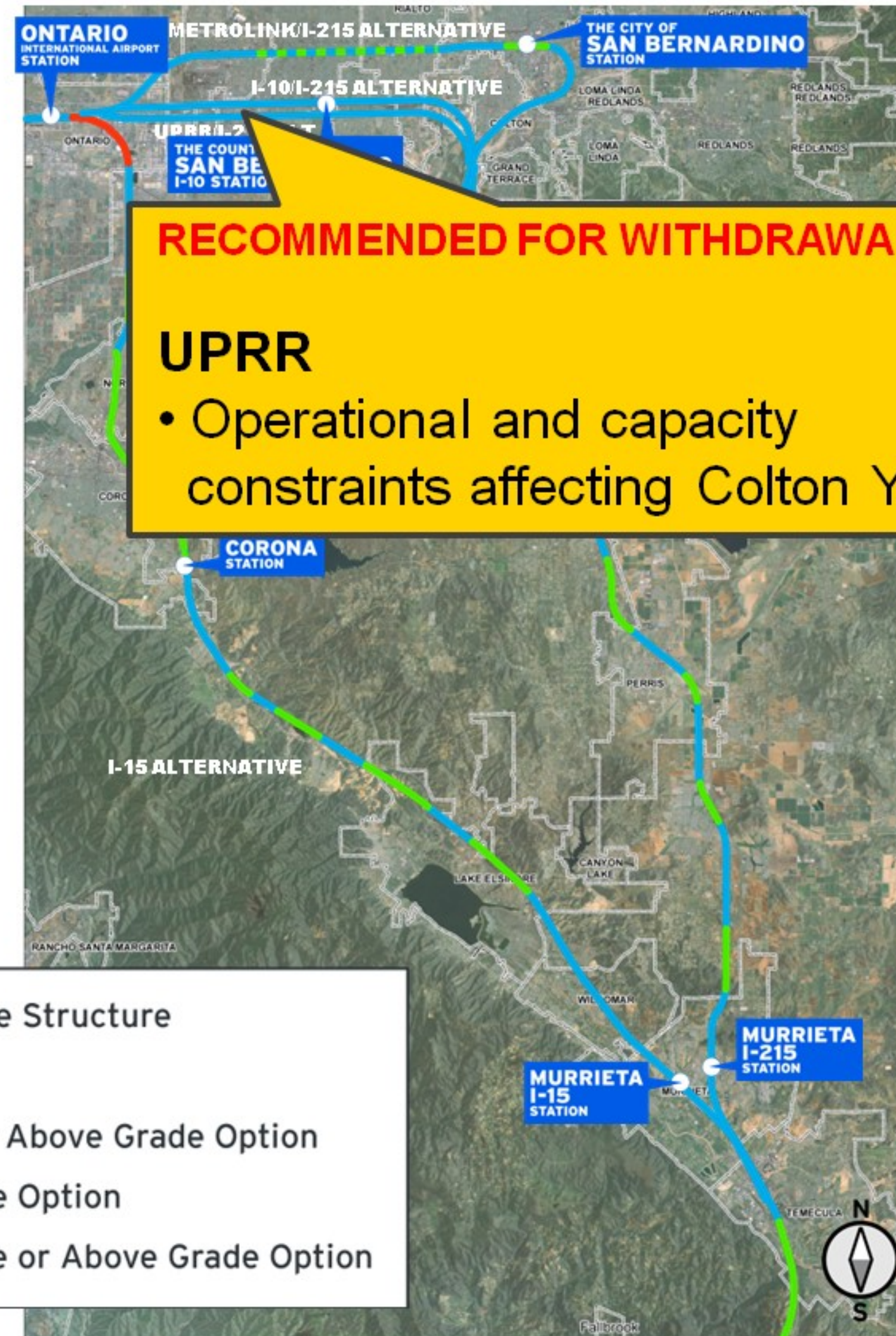
RECOMMENDED FOR WITHDRAWAL:






I-15 Corridor - Milliken/Hamner to Corona (A4.1)

- Affects an existing parcel conserved with Section 6(f) funds for the federally endangered Delhi Sands flower-loving fly

SUBSECTION 2

Ontario International Airport to Murrieta/Temecula



-  Above Grade Structure
-  At-Grade
-  At-Grade or Above Grade Option
-  Below Grade Option
-  Below Grade or Above Grade Option

SUBSECTION 2

Ontario International Airport to Murrieta/Temecula



RECOMMENDED FOR WITHDRAWAL:

IOWA/UCR ALIGNMENTS

IOWA

- Higher impacts on residential, commercial, and industrial uses
- Iowa Avenue alternative is off the I-215 Freeway for a longer distance

UCR

- Not consistent with UC Riverside Master Plan

SUBSECTION 2






Ontario International Airport to Murrieta/Temecula



RECOMMENDED FOR WITHDRAWAL:

RIVERSIDE MLK Boulevard Station

- Highly constrained due to topography
- High visual impacts to surrounding residential areas
- Local authorities support station at March ARB

-  Above Grade Structure
-  At-Grade
-  At-Grade or Above Grade Option
-  Below Grade Option
-  Below Grade or Above Grade Option

SUBSECTION 2

Ontario International Airport to Murrieta/Temecula








SUBSECTION 3

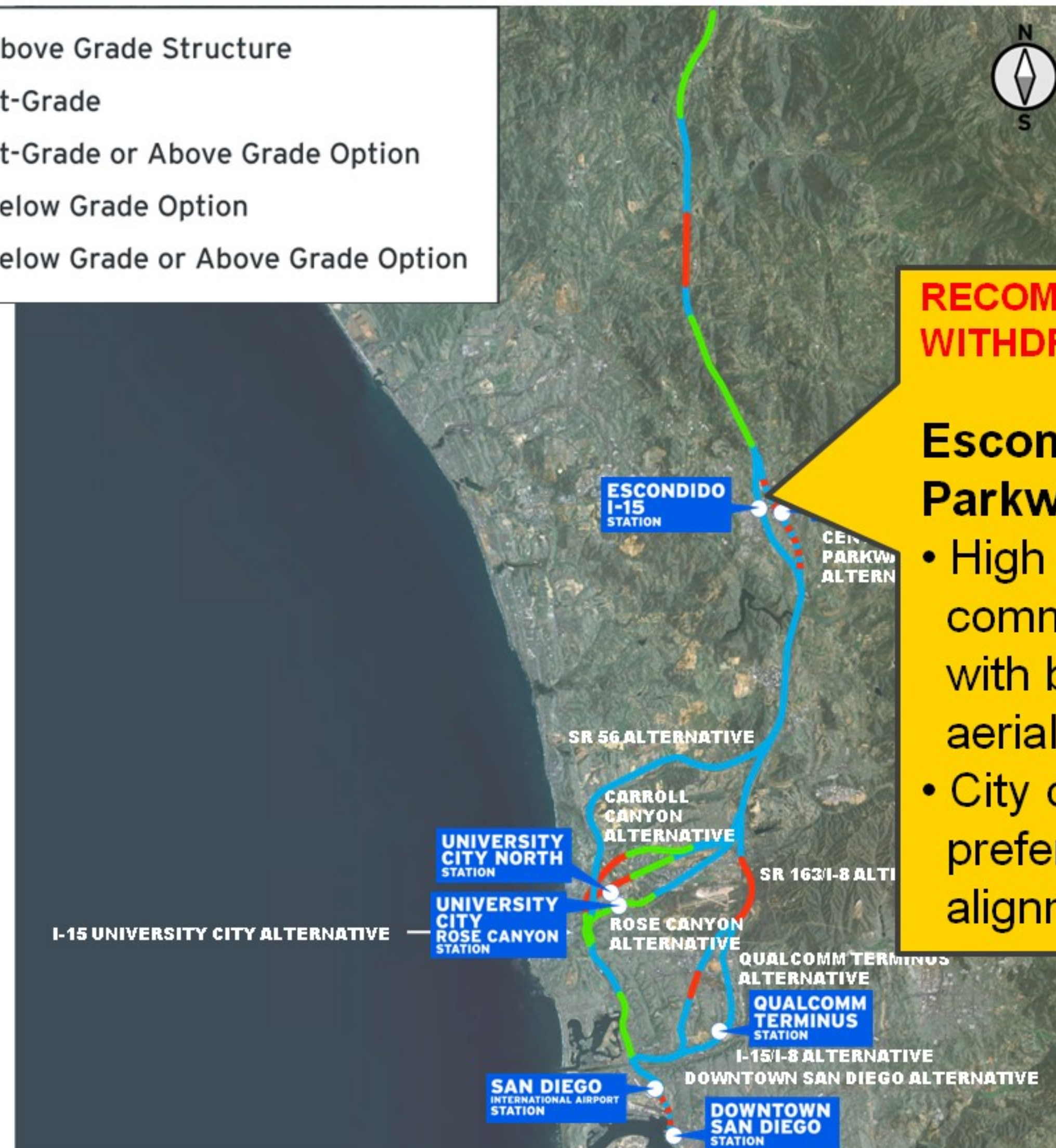
Murrieta/Temecula to San Diego



SUBSECTION 3

Murrieta/Temecula to San Diego

-  Above Grade Structure
-  At-Grade
-  At-Grade or Above Grade Option
-  Below Grade Option
-  Below Grade or Above Grade Option



**RECOMMENDED FOR
WITHDRAWAL:**

Escondido Centre City Parkway

- High disruption to community associated with below grade or aerial options
- City of Escondido prefers Escondido/I-15 alignment option

SUBSECTION 3

Murrieta/Temecula to San Diego

RECOMMENDED FOR WITHDRAWAL:







SR 56

- Highest impact of natural resources
- Highest displacement of residential uses
- Extensive impacts to aquatic resources
- Impacts to vernal pools
- Impacts to USFWS trust lands
- Impacts on protected open space/preserves (MSCP lands)
- Lower design speeds affect HST operations



SUBSECTION 3

Murrieta/Temecula to San Diego

- 
-  Above Grade Structure
 -  At-Grade
 -  At-Grade or Above Grade Option
 -  Below Grade Option
 -  Below Grade or Above Grade Option

RECOMMENDED FOR WITHDRAWAL:

Carroll Canyon (A2.1)

- High impacts to natural resources
- Extensive impacts to aquatic resources
- Impacts to vernal pools
- Impact on protected open space/preserves (MSCP lands)

I-15 UNIVERSITY CITY ALTERNATIVE

UNIVERSITY CITY NORTH STATION

UNIVERSITY CITY ROSE CANYON STATION

ESCONDIDO I-15 STATION

CARROLL CANYON ALTERNATIVE

ROSE CANYON ALTERNATIVE

SR 163/I-8 ALTERNATIVE

QUALCOMM TERMINUS ALTERNATIVE

QUALCOMM TERMINUS STATION

I-15/I-8 ALTERNATIVE



DOWNTOWN SAN DIEGO ALTERNATIVE

SAN DIEGO INTERNATIONAL AIRPORT STATION

DOWNTOWN SAN DIEGO STATION

SUBSECTION 3

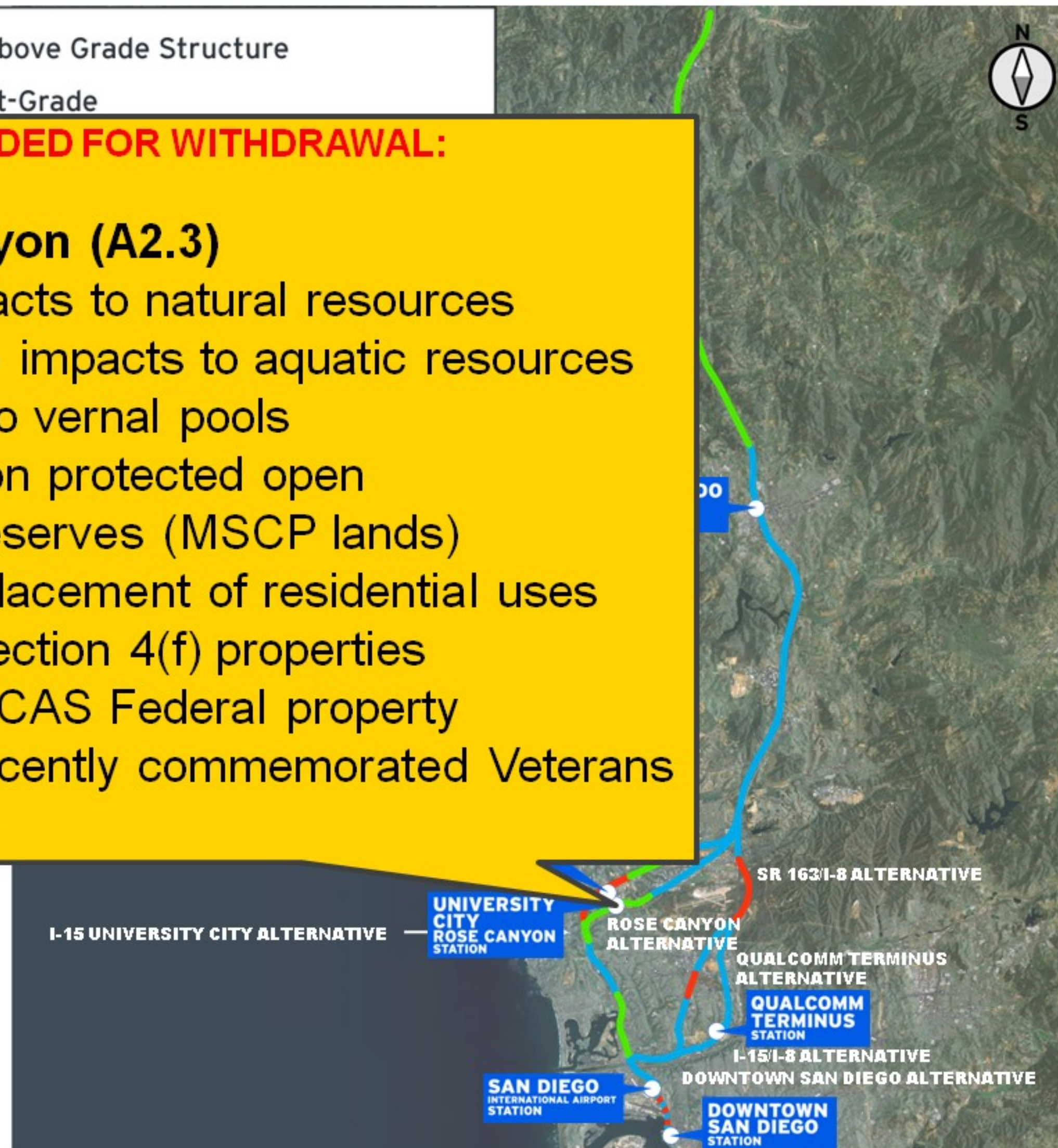
Murrieta/Temecula to San Diego

 Above Grade Structure
 At-Grade

RECOMMENDED FOR WITHDRAWAL:

Rose Canyon (A2.3)

- High impacts to natural resources
- Extensive impacts to aquatic resources
- Impacts to vernal pools
- Impacts on protected open space/preserves (MSCP lands)
- High displacement of residential uses
- Affects Section 4(f) properties
- Affects MCAS Federal property
- Affects recently commemorated Veterans Cemetery



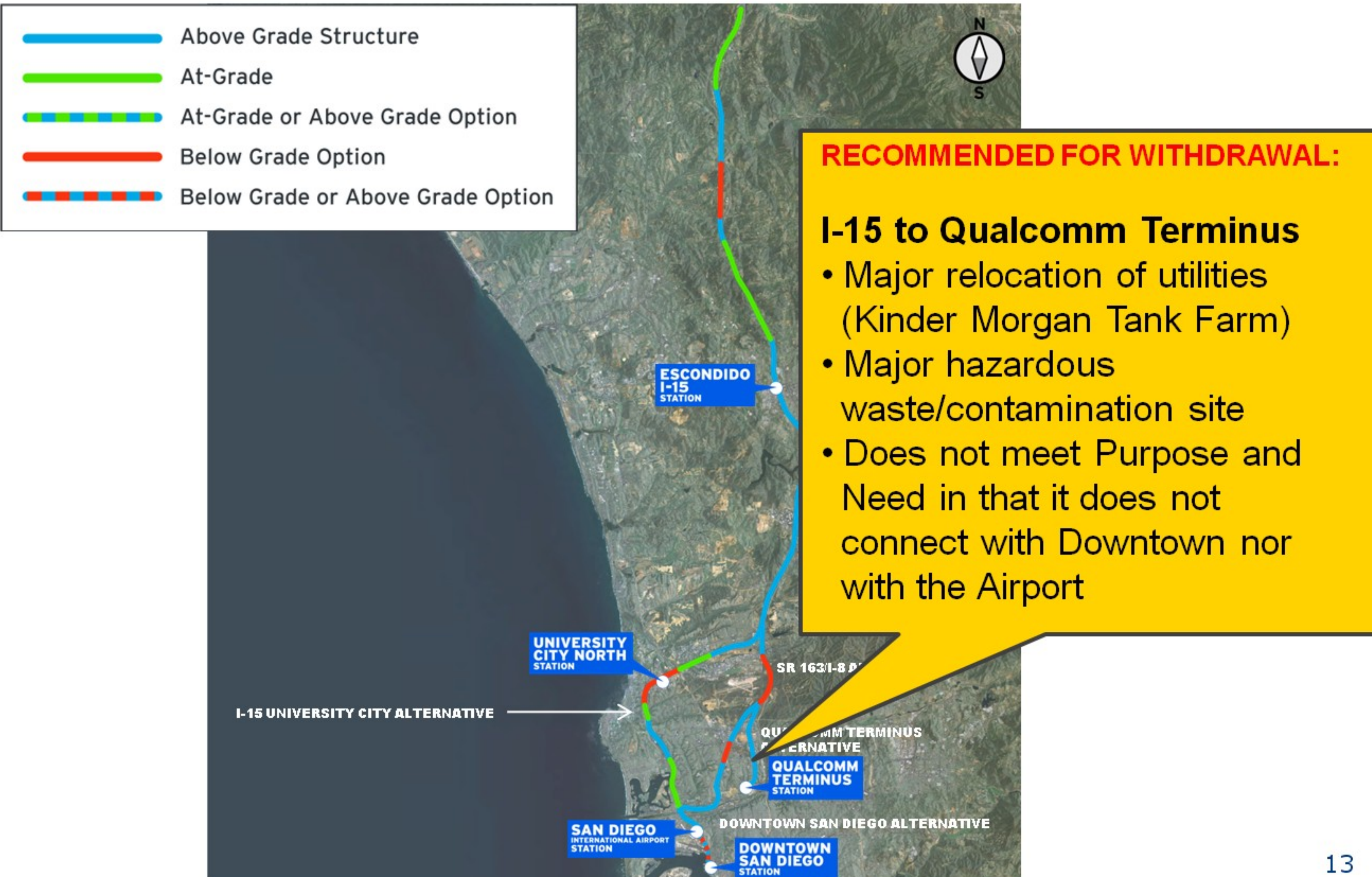





SUBSECTION 3

Murrieta/Temecula to San Diego



SUBSECTION 3

Murrieta/Temecula to San Diego

- 
-  Above Grade Structure
 -  At-Grade
 -  At-Grade or Above Grade Option
 -  Below Grade Option
 -  Below Grade or Above Grade Option

RECOMMENDED FOR WITHDRAWAL:

I-15 to Qualcomm Terminus

- Major relocation of utilities (Kinder Morgan Tank Farm)
- Major hazardous waste/contamination site
- Does not meet Purpose and Need in that it does not connect with Downtown nor with the Airport

I-15 UNIVERSITY CITY ALTERNATIVE

UNIVERSITY CITY NORTH STATION

ESCONDIDO I-15 STATION

SR 163/I-8 DIVERGENCE

QUALCOMM TERMINUS ALTERNATIVE

QUALCOMM TERMINUS STATION






SAN DIEGO INTERNATIONAL AIRPORT STATION

DOWNTOWN SAN DIEGO ALTERNATIVE

DOWNTOWN SAN DIEGO STATION

SUBSECTION 3

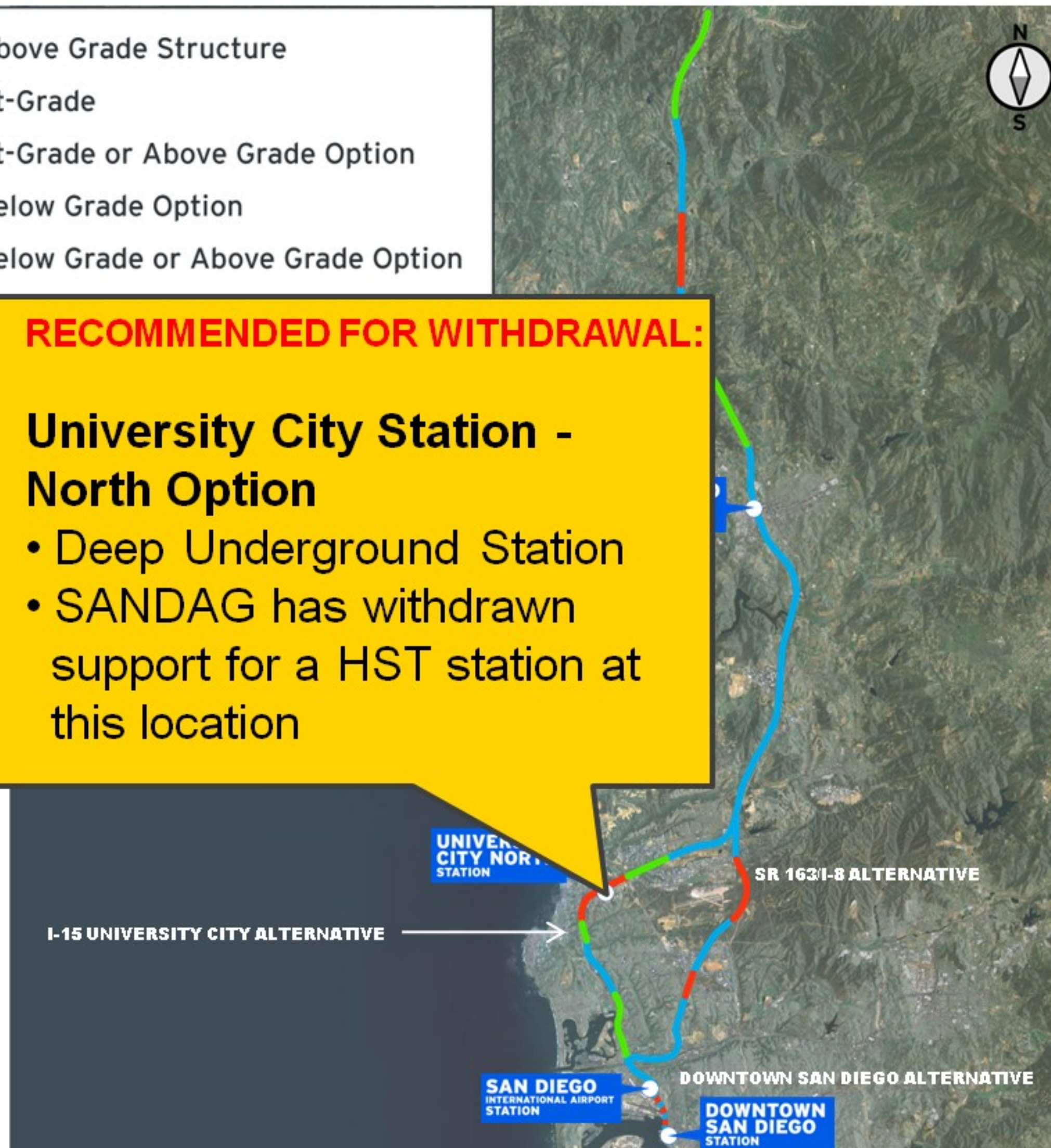
Murrieta/Temecula to San Diego

-  Above Grade Structure
-  At-Grade
-  At-Grade or Above Grade Option
-  Below Grade Option
-  Below Grade or Above Grade Option

RECOMMENDED FOR WITHDRAWAL:






University City Station - North Option

- Deep Underground Station
- SANDAG has withdrawn support for a HST station at this location



SUBSECTION 3

Murrieta/Temecula to San Diego

-  Above Grade Structure
-  At-Grade
-  At-Grade or Above Grade
-  Below Grade Option
-  Below Grade or Above Grade

RECOMMENDED FOR WITHDRAWAL:

Downtown San Diego Alignment and Station Option

- Impacts to downtown waterfront development
- Impacts Santa Fe Depot, listed on the National Register of Historic Resources
- Conflicts with planned development (north Embarcadero Redevelopment Plan)
- Substantive disruption impacts to existing rail operations
- High visual and traffic impacts
- Local agencies prefer SDIA option

I-15 UNIVERSITY CITY

SAN DIEGO
INTERNATIONAL AIRPORT
STATION

DOWNTOWN SAN DIEGO ALTERNATIVE

DOWNTOWN
SAN DIEGO
STATION

SUBSECTION 3

Murrieta/Temecula to San Diego



SUMMARY OF PRELIMINARY ALTERNATIVES ANALYSIS RESULTS



- Reduced 500 miles of Alternatives Alignments and design options to 290 miles (corridor length 170 miles)
- Reduced 24 Station Options to 13
- Recommended withdrawal of alignments for utilizing UPRR ROW or immediately adjacent to UPRR
- Concluded a variety of Alternative Alignments will allow for meeting the 1 hour 20 minute express run-time requirement
- Recommended that San Diego International Airport is an appropriate terminus for the HST system

MORE ANALYSIS NEEDED

Continued review of these areas:

- **LAUS connections** (Los Angeles County)
- **I-10 and SR 60** (Los Angeles County)
- **Holt and First Street/State Street** (Los Angeles and San Bernardino Counties)
- **Metrolink San Bernardino and I-10** (San Bernardino County)
- **I-15 and I-215** (Riverside County)
- **LOSSAN and SR 163** (San Diego County)

Ensuring connectivity with other HST sections

- Investigate vertical profiles in areas voicing concern
- Ridership evaluation
- Compare relative costs
- Confirm operational effectiveness
- Confirm compatibility of HST with other proposed transportation projects
- Relative environmental impacts

ALIGNMENTS AND STATIONS RECOMMENDED TO BE CARRIED FORWARD



TIMELINE, NEXT STEPS & PUBLIC COMMENT OPPORTUNITIES



**March 3,
2011**

- Preliminary Alternatives Analysis Report to CHSRA Board

**March –
June,
2011**

- Public Open House Meetings (up to 28 meetings in four counties)
- Continue to work with communities and So Cal ICG on alignment and station refinements

FY 11-12

- Supplemental Alternatives Analysis Report *

**FY 12-13
thru
FY 14-15**

- Preliminary Engineering *
- Draft Environmental Impact Statement/Report *

FY 15-16

- Final Environmental Impact Statement/Report *
- Record of Decision and Notice of Determination *

Ongoing Public Involvement

* Schedule subject to change dependent upon project funding.